

Date: Thursday, 12/20/2007 3:17:44 PM  
 User: Kim Johnston

## Process Sheet

3

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : AFT X-TUBE EXT HEIGHT(-013)  
 Job Number : 36470  
 Estimate Number : 10563  
 P.O. Number :  
 This Issue : 12/20/2007 S.O. No. :  
 Prsht Rev. : NC  
 First Issue : 1/1 Type : LANDING GEAR  
 Previous Run : 35300  
 Written By :  
 Checked & Approved By : 07.12.21  
 Comment : Est Rev: D-05.03.21 Added bending procedure KJ/JLM

Part Number : D205596107  
 Drawing Number : D205596107-013  
 Project Number : N/A  
 Drawing Revision : A  
 Material :  
 Due Date : 1/15/2008 Qty: 1 Um: Each

PER PRAM. ISSUES  
 OF D205-596-107  
 REV. B  
 12/20/21

Additional Product



Job Number:



Seq. #: Machine Or Operation: Description:

1.0 DC DOCUMENT CONTROL



①

Comment: DOCUMENT CONTROL

Photocopy D205-594 bluefile &amp; type labels per PPP D205-596-107CHG001

K8 08-01-14

2.0 D2890 Aft Crosstube



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D2890 Aft Crosstube B36G20

EL 8-1-11

3.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Mark 20.36" for cutting from tangential line in the straight section from D2890 as per Dwg wall template.

EL 8-1-11

4.0 QC15 DIMENSIONAL CHECK OF X-TUBES



Comment: DIMENSIONAL CHECK OF X-TUBES

5.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Cut as per Dwg D205-596-107

2-Deburr &amp; Inspect for surface damage. Polish cut surface. Scribe part # and batch # on one end of tube.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 12/20/2007 3:17:44 PM  
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Job Number: 36470

Part Number: D205596107

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

~~QC5~~ *QC5*

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*08/01/25*

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

*AW M 08-01-22*

Touch up ends of the tube with Chemical Conversion Coat per QSI 005 4.1

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

*08/01/25*

*08-01-22*

*(1)*

9.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside and outside with Immron per QSI 005 4.2

*25 08-02-06*

10.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

*08/01/08*

11.0

~~D2056000~~

*D3595063530*

Abrasion Strip



Comment: Qty.: 4.6040 f(s)/Unit Total : 4.6040 f(s)

Pick:

Qty Part number

Description

Batch

*4x* ~~D2056-600(10.09")~~ Abrasion Strip

*35125*

*25 08-02-07*

12.0

D29401

Support



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number

Description

Batch

2 D2940-1

Support

*32780*

*25 08-02-07*

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: D Date: 08/02/14  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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Drawing Name: AFT X-TUBE EXT HEIGHT(-013)

Job Number: 36470

Part Number: D205596107

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

MS2192028

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part number

Description

Batch

4 MS21920-28

Clamp

106864

RT 08-02-07

14.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install abrasion strips per QSI 035 position using DT8582. Install supports and clamps per Dwg

D205-596-107. Torque clamps to 80-100 in lb. Seal edges of support using Sikaflex

Magnabond B 106695 exp 08-11-01

RT 08-02-07

A/R Sikaflex 291

Expiry date: \_\_\_\_\_

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 06/01/08 (12)

16.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D205-596-107

Location: \_\_\_\_\_

PPP Rev: \_\_\_\_\_

D8/2/13 SQ(12)

17.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

(12)  
D 08/02/14

Job Completion

run 2008/2/14  
(12)

POSITIVE RECALL

EFFECTIVE 07/12/14 AUTH USIGNED UDATE 08/02/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

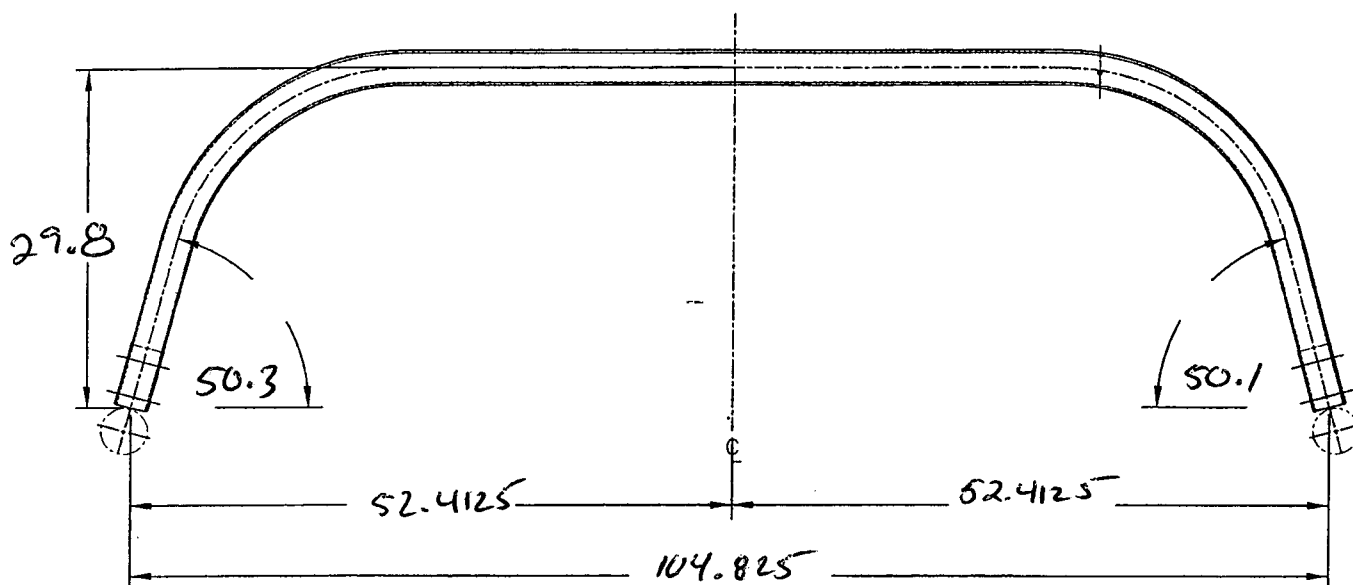
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

DART AEROSPACE LTD		Work Order:	36470
Description: Crosstube High-High Aft		Part Number:	D205-596-107
Inspection Dwg: D205-596-107	Rev: A B <i>[Signature]</i>		Page 1 of 1

Required Dimension	Min	Max
Height	29.7	29.9
1/2 Span	52.4	52.6
Angle	49	52
Total Span	104.8	105.2



Comments

QC15 Inspection	<i>[Signature]</i>
Date	08-01-11

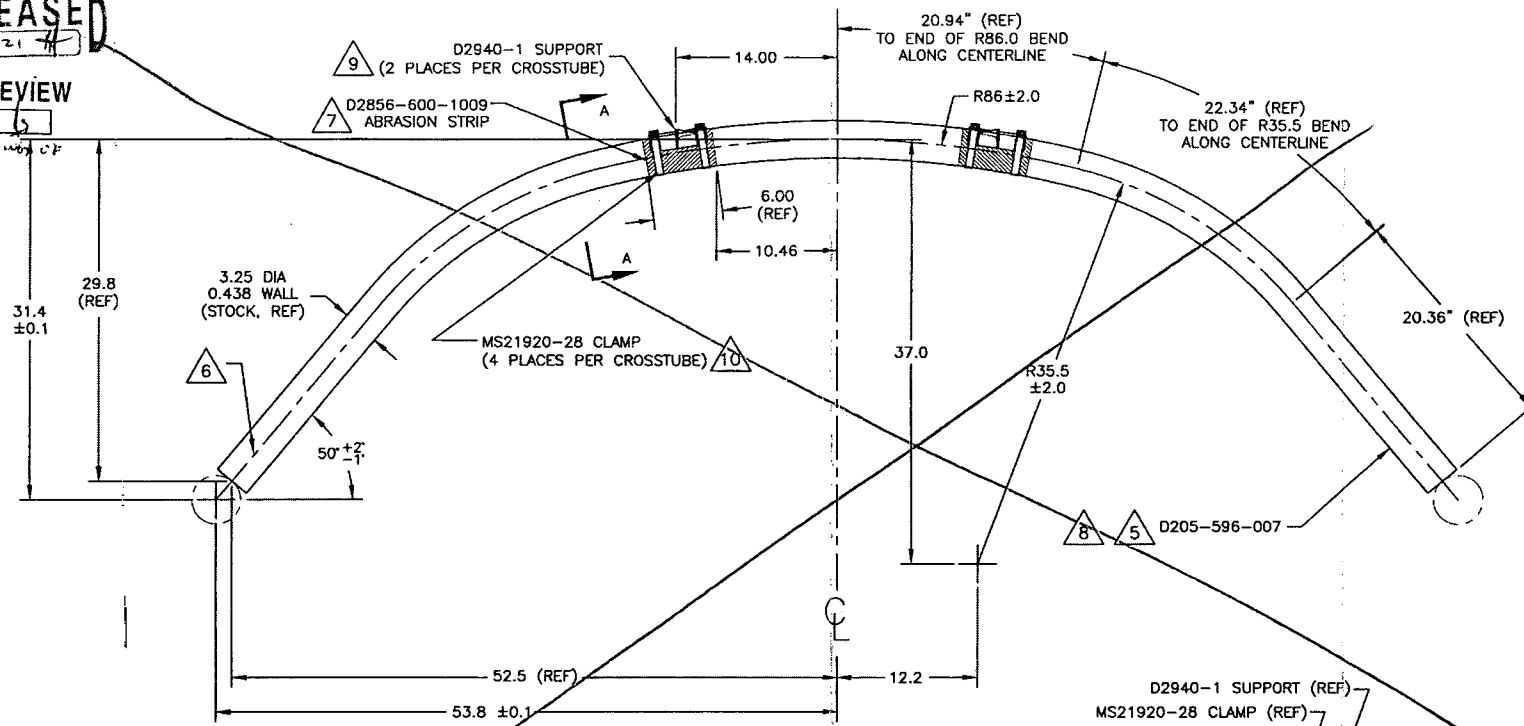
Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM <i>[Signature]</i>	<i>[Signature]</i>

RELEASED

UNDER REVIEW

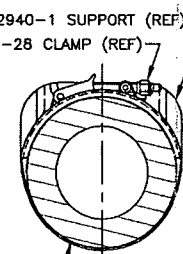
02.12.04

MANUFACTURE OF SUPPORTS



# GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) MATERIAL: MANUFACTURE FROM D6008-180  
FINISHED LENGTH = 127.28
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE
- 5) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 6) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS
- 7) INSTALL D2856-600-1009 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2940-1 SUPPORT, PER QSI 035
- 8) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 9) SEAL EDGES OF SUPPORTS USING SIKAFLEX-241/-291 SEALANT (OPTIONAL)
- 10) TORQUE CLAMPS 80 TO 100 IN-LB



SECTION A-A  
SCALE 2:5

D2856-600-1009 ABRASION STRIP (REF)



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A		02.11.20	NEW ISSUE
DESIGN	✓	DRAWN BY	✓
CHECKED	✓	APPROVED	✓
DATE	02.11.20	TITLE	CROSSTUBE AFT EXTENDED
		DRAWING NO.	D205-596-107
		SCALE	1:10
		REV. A	SHEET 1 OF 1

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HAMPSHIRE, ENGLAND, CANADA

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36470



**PARTS LIST:**

Qty	Part Number	Description
X	D205-596-107	CROSSTUBE AFT EXTENDED
1	D6008-180	CROSSTUBE
2	D2940-1	SUPPORT
4	D3595-063-530	RUBBER CUSHION
4	MS21920-28	CLAMP
A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

**GENERAL NOTES:**

- 1) MATERIAL: MANUFACTURE FROM D6008-180  
FINISHED LENGTH =  $127.28 \pm 0.02$
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART 005 4.2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH  
VIBRATING STYLUS
- 7) WEIGHT: 50 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE
- 9) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO  
BENDING IS 6% BASED ON O.D.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE  
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS  
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT  
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) APPLY A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2940-1 THAT  
WILL BE IN CONTACT WITH THE CROSSTUBE. LET CURE FOR 12 HOURS AFTER INSTALLATION  
AND PRIOR TO PACKAGING.
- 12) INSTALL MS21920-28 CLAMPS WITH D3595-063-530 RUBBER CUSHIONS TO SECURE D2940-1  
SUPPORT ON THE TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE  
CROSSTUBE SUPPORT.

**NOTE:** IT IS ACCEPTABLE TO SUBSTITUTE MS21920-28 CLAMPS WITH LONGER OR SHORTER  
MS21920-XX CLAMPS TO ACCOMODATE VARYING DIAMETERS. ENSURE THERE IS A MINIMUM OF  
1.5 THREADS IN SAFETY ON THE NUTS.

- 13) TORQUE CLAMPS 80 TO 100 IN-LB

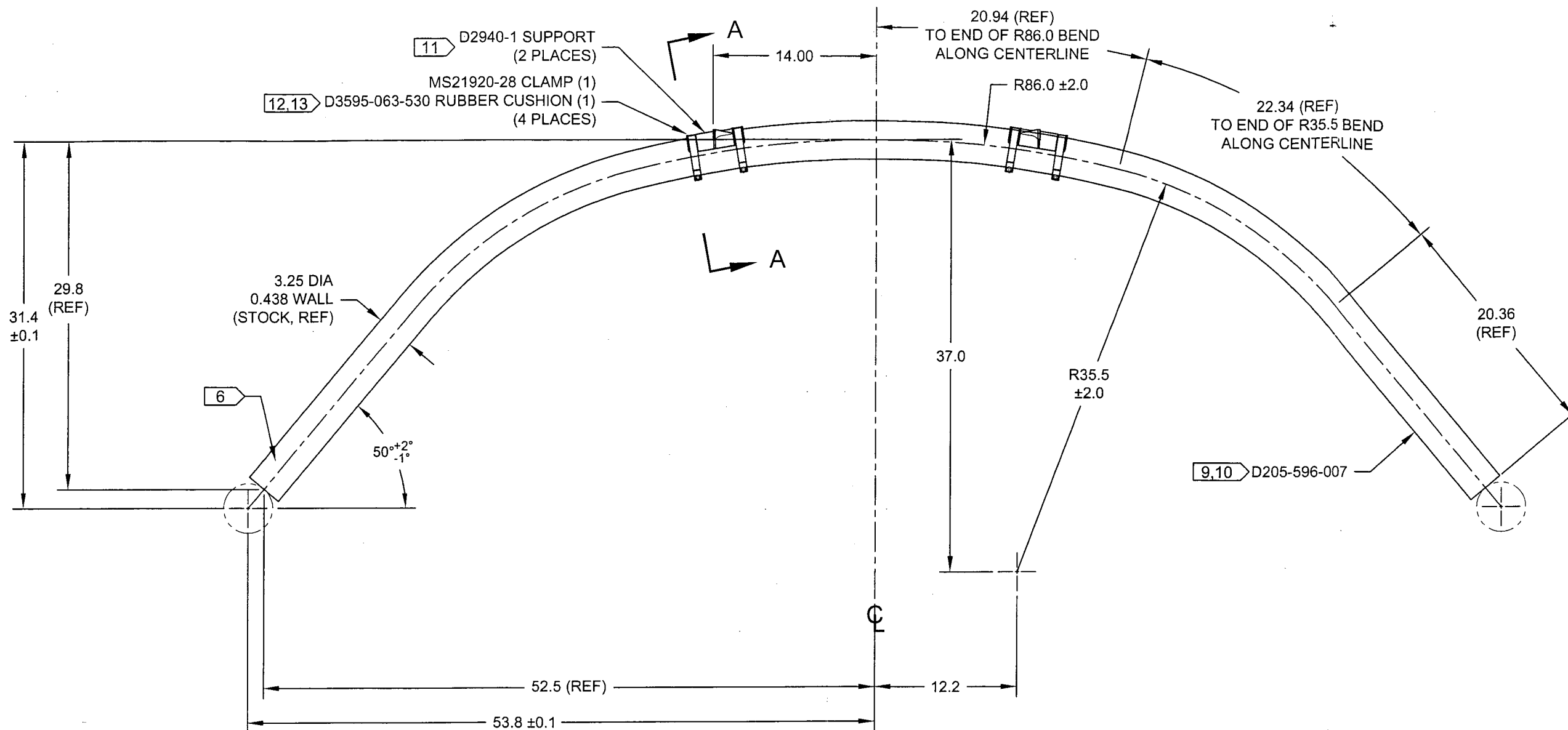
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B	SUPPORT NOW MAGNOBONDED; REMOVE D2856-600-1009 ABRASION STRIP; UPDATED NOTES; ADDED D3595-063-530 CUSHION	MB	07.12.03
A	NEW ISSUE	DS	02.05.27
REV.	DESCRIPTION	BY	DATE
DESIGN	14	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	14		
CHECKED	EL	DRAWING NO.	REV. B
MFG. APPR.	EP	D205-596-107	SHEET 1 OF 2
APPROVED	14P	TITLE	SCALE
DE APPR.		CROSSTUBE AFT EXTENDED	NTS
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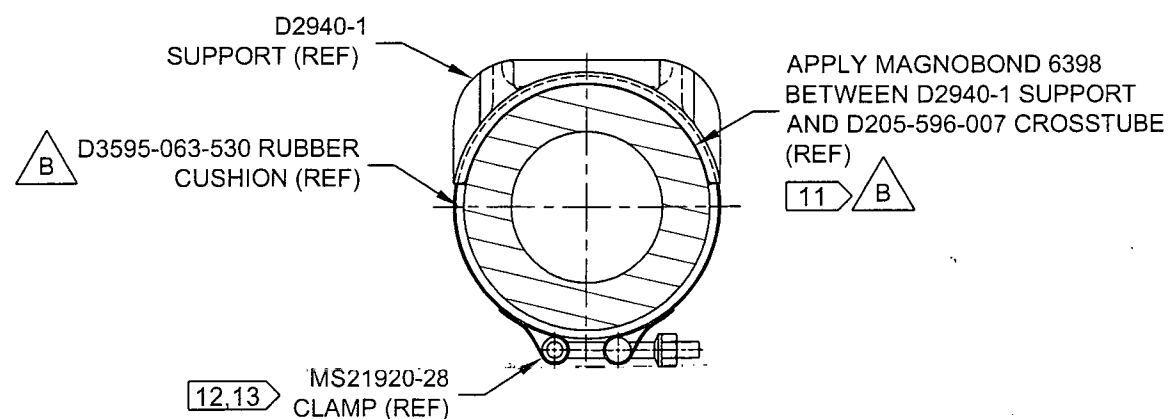
**PRELIMINARY ISSUE**

07.12.21

8 7 6 5 4 3 2 1



**D205-596-107 CROSSTUBE AFT EXTENDED**



**SECTION A-A**  
SCALE 2:5

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**PRELIMINARY ISSUE**  
07.12.03

DESIGN.		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D205-596-107	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		CROSSTUBE AFT EXTENDED	1:10
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8 7 6 5 4 3 2 1



**PARTS LIST:**

Qty	Part Number	Description
X	D205-596-107	CROSSTUBE ASSEMBLY, HI-HI AFT
1	D6008-180	CROSSTUBE
2	D2940-1	SUPPORT
4	D3595-063-530	RUBBER CUSHION
4	MS21920-28	CLAMP
A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

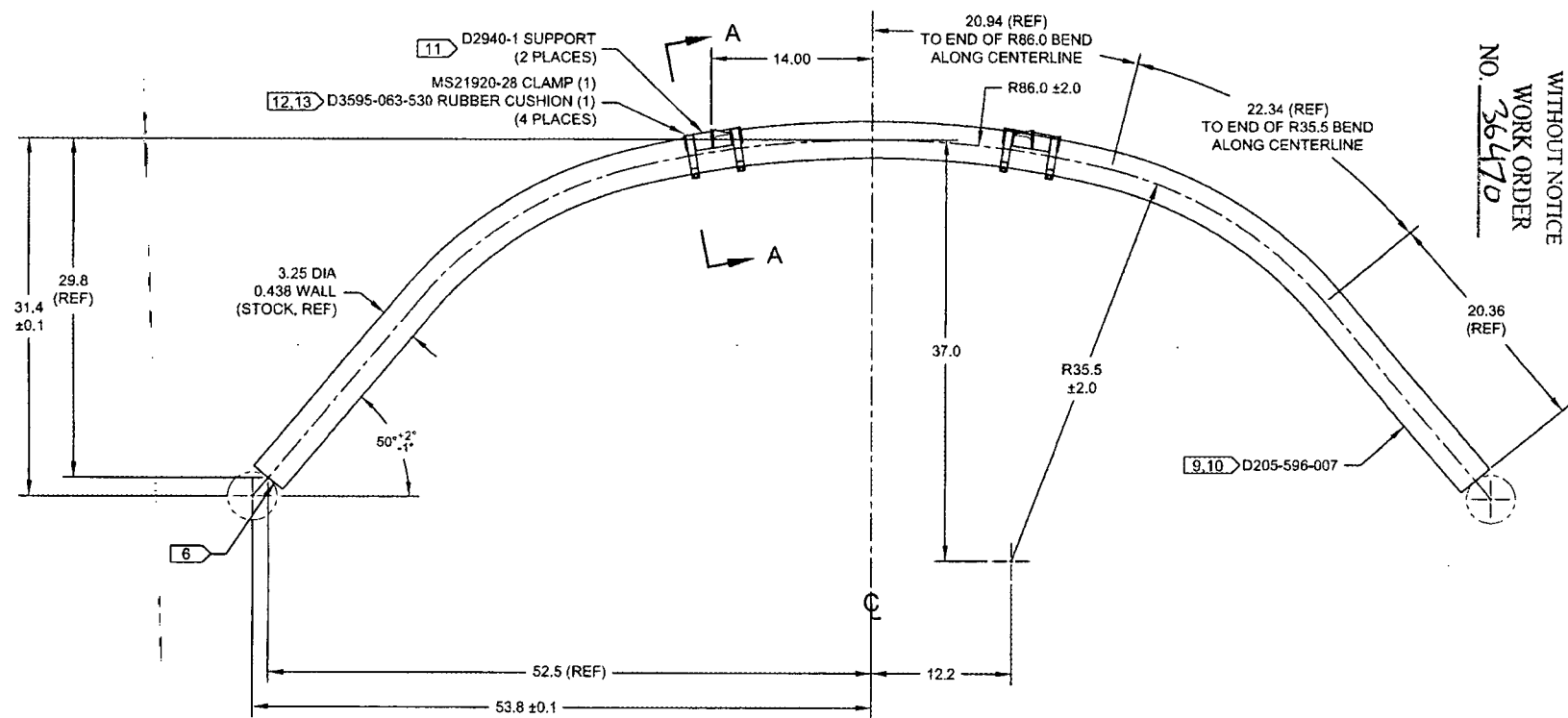
**GENERAL NOTES:**

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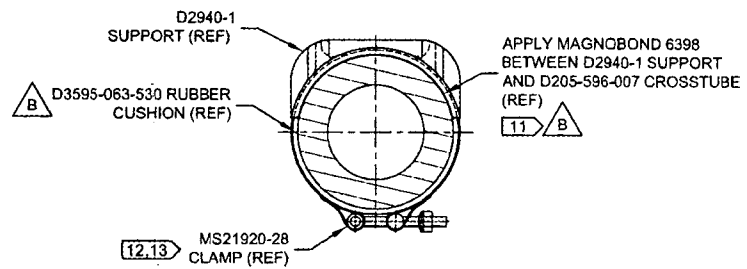
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A	NEW ISSUE	DS	02.11.20
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>[Signature]</i>	<b>DART AEROSPACE LTD</b>	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
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APPROVED	<i>[Signature]</i>	TITLE	SCALE
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**D205-596-107 CROSSTUBE ASSEMBLY, HI-HI AFT**



**SECTION A-A**  
SCALE 2:5

DESIGN	1	<b>DART AEROSPACE LTD</b>	
DRAWN	1	HAWKESBURY, ONTARIO, CANADA	
CHECKED	PH	DRAWING NO.	REV. B
MFG. APPR.	PH	D205-596-107	SHEET 2 OF 2
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